

giving access to the enclosure was open. So the lioness went into the open enclosure into which the tiger had already been admitted.

The tiger at once attacked the lioness. A terrific battle ensued and the lioness put up a brave fight for her life. But she was no match for the tiger and everything the keepers and others could do was futile, so the poor brave lioness was soon killed.

Even a full-grown lion has been known to be no match for a full-grown tiger, the lioness therefore had even less chance, and the poor creature lost her life through the carelessness of a keeper.

MYSORE,

23rd January 1946.

CHARLES THEOBALD, F.Z.S.

5.—A QUEER ANIMAL HABIT.

I should be glad to be enlightened as to the purpose, and its reason or cause, to which had been put some small, smooth, cone-shaped rocks which I found in two and far apart caves, while shooting in the N. Chanda Div. before this war, and referred to in my diary as 'wiping stones' (for lack of a better term to suggest the use to which they seemed to have been put by animals, but of whose identity I am still in doubt). Perhaps if I narrate the circumstances in which I found the stones, while describing them, someone might be able to suggest answers to the obvious questions—while an authoritative explanation will be all the more welcomed.

The first cave was shallow and wide open—formed mainly by a projection of the floor to form a narrow ledge outside and which was not completely overhung by the roof, so that the interior was exposed to much of the southern sky; it was situated on the southern face of a rocky spur projecting westward from a low tableland. I had been informed that this cave usually harboured a bear during the hotter part of the day (summer). I never found this cave occupied, nor any visible tracks on the floor, for the surface of the rock that formed it was covered with a thin layer of fine grit. It was during my first visit, while awaiting the return of the occupier (if any) that I noticed a conoid outcrop of rock close to the entrance at one side—because its upper surface was black. I found that it was thinly and fairly evenly smeared—almost glazed—with a black, tarry, substance (but quite dry) which, when I smelt it closely, stank like the faeces of the larger carnivora. Just beside it was a low, smooth, and slightly convex outcrop of rock which bore smudges and smears of the same foul-smelling tarry substance. When questioned, my Gond companion merely muttered 'Reech' (Bear). As our 'lingua franca' was a smattering of Marathi on both sides, I left it at that—though pondering the fact that the excreta of many bears I'd examined in that block consisted mostly of residues of fruits and black ants, also that I had seen the fairly fresh faeces of a panther on the crest above us, while stalking the cave that forenoon. About a fortnight later, while examining the ground near the toe of the spur for signs of the bullet that had smashed the shoulder of a tigress there (which, though badly crippled, had cleared out of that locality), I got a perfect 'sitter' of a shot at a

panther couched on a rock almost directly above the cave (and, as so often with easy 'sitters'—though here tempted by the offer of a thick neck against the sky—missed). A troop of lungoors was always in the jungle below and some usually sat on the toe of the spur before the sun reached it. Of the numerous bears and many solitary boars that roamed the block I saw, here, only one bear, three boars, one porcupine, one civet cat—and, animals unlikely to use caves, sambar, chital and only 2 four-horned antelopes. A pack of jackals found the uneaten carcass of a buffalo on the third night after the tigress had killed it. And the only hyaena I saw was more than a mile from that spot.

The other cave, much larger and deeper, was more than a straight mile away to the south-east, where a nullah cut down through a part of the tableland and found its way out southwardly through sheer cliffs. It was while first reconnoitring the block that I found blurred tracks of a tiger in the gravel of the upper part of the nullah. Losing these tracks where the dry bed was bare rock, the Gond told me that, further down, was a cave which a bear (or bears) occupied during the hot hours of the day (this the month of May and the 'Loo' blowing down the nullah like gusts out of an open furnace). The cave was where the high cliffs began; wide and low of entrance it ran about 40 or 50 feet into the base of a cliff, and two tunnel-like bolt-holes connected with the main passage, from one side. After making strange noises here and then at the mouth of the cave, we gratefully rested just within the entrance and without exploring the dim interior. Almost directly opposite, but high in the other cliff, was another small, oval, cave; the abode of the jungle 'Deo' (god)—for long the legendary protector of the two tigers I knew to be in the block then—and hewn steps led up to it and vermilion paint daubed its arched entrance. Just within the lower cave, and to one side, was another—but more conical—outcrop of rock, having a remarkable resemblance to a phallic stone, smeared with the same stinking, tarry, substance. The light was sufficient to reveal that the floor surface at the entrance had been lightly 'disturbed'—no more than just that; but I could not find footprints nor hairs, nor could I detect odour of animal or human occupation (poachers were usually busy after moonrise and I found two of their 'hides' in the jungle; apparently, caves do not appeal to them, though I often contemplated sitting up in one of these two and refrained only because I was out for tiger and the chance of success was too remote). To my enquiry about the use of that conical stone, my companion again ascribed it to bears—now making a gesture to, and significant movements with, his buttocks. So I wrote in my diary that night, 'Found another wiping-stone there'.

I'd like to mention now that there were a few small, but deep, cliff-caves further down that nullah and which certainly did harbour bears—by which same token I was without sufficient curiosity to enter them. The wounded tigress was finally discovered lying just within the entrance of the large cave and was killed there; she had caught and eaten a porcupine at the first pool (stagnant) lower down the nullah, the night before. My Gond friend, naturally, attributed the satisfactory conclusion of this anxious episode to the

fact that he had previously propitiated the 'deo' in the cave high up in the opposite cliff; but he seemed to maintain that the large cave was used only by bears and clearly did insist that the tigress had *had* to come there to die because she was the protegee, the 'protected', of the 'deo' in the opposite cave! To me an unsatisfactory explanation of the conical stone; for, while measuring and photographing the tigress, I reverted to the subject of that stone. And, from a passing acquaintance with many more caves of that size in India, I had formed an opinion that the larger, more 'open', caves were favoured by tiger and panther, though rather as a 'pied a terre' and on a tacit understanding of 'first come, first served'—bears included; and any small tunnels or burrows within, used regularly by smaller creatures, e.g. porcupines. Indeed, in the southern spurs of the Satpuras I was once shown an almost similar cave and told that, every year, a tigress came there to whelp (probably not the same one annually) and that one was using it then; and, as a matter of interest, I did flush a heavy, sleeping tigress that morning and within a hundred yards of the cave and, as she went lobbing and crashing across my front, I did think she was in cub. But actually, she had been sleeping, heavily gorged, between two of her natural kills.

The stones mentioned still remain a puzzle to me. If used to relieve an irritation caused by worms, surely the attempt would have been made soon after defaecation (as in the case of dogs); and, except for only the droppings of bats in the larger cave, there was none of any kind in either. And while conceding that a bear—because of its all-over shagginess—might be accustomed to thus remove any soiling that had occurred during defaecation, I cannot imagine the larger carnivora having need to do the same, nor that their siesta would be disturbed by such a desire. Yet, that tarry substance stank of the faeces of tiger and panther, with the black of a blood meal—and I cannot understand *how* those protruding (about six and eight inches high, respectively) stones were so evenly smeared over all their upper surface and down to within a few inches of their broad bases (roughly about 8" × 12")!

SINGAPORE,
10th April 1946.

K. BOSWELL,
Capt., I.A.M.C.

[Mr. R. C. Morris to whom Capt. Boswell's interesting note was sent for opinion, comments as follows:—

'Bears do, I think, rub themselves on rocks on defecating after feeding on the pods of *Cassia Fistula* ('Indian Laburnum').

I have observed this on certain rocks in dry river beds: and the local Sholagas gave this explanation.

I have also frequently observed that stones in caves commonly used by bears have a polished appearance; though I have never smelt them. The pods of the *Cassia Fistula* contain, as you know, a thick black tarry substance, which envelopes the seeds, and the Sholagas say that this causes fouling of the hind parts of the bear on defecation; and the animal then resorts to rubbing on rocks.'

[This may be the answer to Capt. Boswell's query.—EDS.]